

IN THE CLAIMS:

1-13 (Cancelled)

14. (Currently Amended) A variable geometry cylinder mirror comprising:
a frame member;
a flexible thin film in which two end portions opposing each other are supported by said frame member;
a reflection surface which is provided on said flexible thin film and reflects light;
a first electrode provided integrally with said flexible thin film; and
a second electrode substantially fixed to said frame member so as to oppose said first electrode on an opposite side of said reflection surface, the second electrode being divided in the direction connecting said two end portions,
wherein the configuration of said reflection is controlled to a desired configuration by applying a desired voltage selectively to between said first electrode and said divided second ~~or third~~ electrode.

15. (Original) The variable geometry cylinder mirror according to claim 14, wherein the reflection surface of said flexible thin film is formed of metallic thin film and serves as said first electrode.

16. (Original) The variable geometry cylinder mirror according to claim 14, wherein an openings are provided on both sides of said reflection surface in said flexible member across a straight line connecting the end portions supported by said frame member.

17. (Original) The variable geometry cylinder mirror according to claim 14, wherein in a region between the end portion supported by said frame member and said reflection surface in said flexible thin film, stiffness thereof in the direction in which said second electrode is divided is reduced.

18. (Original) The variable geometry cylinder mirror according to claim 17, wherein the region in which the stiffness of said flexible thin film is reduced is wave-like.

19. (Original) The variable geometry cylinder mirror according to claim 18, wherein said flexible thin film is composed of overlaid layers of metallic thin film and silicon nitride or metallic thin film and silicon oxide.

20. (Original) The variable geometry cylinder mirror according to claim 17, wherein as for the sectional area of said flexible thin film in a direction perpendicular to the direction in which said second electrode is divided, that of the region in which the stiffness of said flexible thin film is reduced is smaller than that of a region corresponding to said reflection surface.

21. (Original) The variable geometry cylinder mirror according to claim 17, wherein an opening or a cutout is provided in the region in which the stiffness of said flexible thin film is reduced.

22. (Original) The variable geometry cylinder mirror according to claim 14, wherein said flexible thin film is composed of overlaid layers of metallic thin film and polymer material thin film.

23. (Original) The variable geometry cylinder mirror according to claim 20, wherein said flexible thin film is composed of overlaid layers of metallic thin film and polymer material thin film.

24. (Original) The variable geometry cylinder mirror according to claim 21, wherein said flexible thin film is composed of overlaid layers of metallic thin film and polymer material thin film.

25. (Cancelled)

26. (Original) The variable geometry cylinder mirror according to claim 14, wherein said flexible thin film having said frame member, said reflection surface and said first electrode is manufactured by:

a diffused layer forming step of forming a diffused layer having a predetermined shape of a conductive type in a first main face of a mono-crystal silicon substrate of another conductive type;

a thin film laminating step of laminating a thin film on the first main face of the mono-crystal silicon substrate;

an etching step of, with a predetermined voltage applied to the diffused layer of said conductive type, carrying out electrochemical etching from a second main face in an etching solution; and

cutting and separating step of cutting and separating frame-like mono-crystal silicon which is part of said mono-crystal silicon substrate form portions corresponding to said flexible thin film and said frame member.

27. (Cancelled)

28. (Original) The variable geometry cylinder mirror according to claim 18, wherein said flexible thin film having said frame member, said reflection surface and said first electrode is manufactured by:

a groove forming step of forming parallel grooves in a first main face of a flat substrate;

a thin film forming step of forming a thin film on the first main face of said substrate;

an etching step of etching until the thin film formed in said thin film forming step is exposed from a second main face of said substrate; and

a cutting and separating step of cutting and separating a frame-like portion which is part of said substrate from portions corresponding to said flexible thin film and said frame member.